

**REMARKS**

**Petition for Extension of Time Under 37 CFR 1.136(a)**

It is hereby requested that the term to respond to the Examiner's Action of March 20, 2006 be extended one month, from June 20, 2006 to July 20, 2006.

Authorization to charge a Credit Card is given to cover the extension fee. The Commissioner is hereby authorized to charge any additional fees associated with this communication to Deposit Account No. 19-5425.

In the Office Action, the Examiner indicated that claims 1 through 30 are pending in the application and the Examiner rejected all claims.

**Claim Rejections, 35 U.S.C. §112**

On page 2 of the Office Action, the Examiner rejected claims 11-30 under 35 U.S.C. §112, second paragraph. The claims have been amended to overcome the rejections made by the Examiner. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims under 35 U.S.C. §112.

**Claim Rejections, 35 U.S.C. §101**

On page 3 of the Office Action, the Examiner rejected claims 21-30 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The applicant has amended claims 21-30 in accordance with the Examiner's suggestions. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 21-30 under 35 U.S.C. §101.

**Claim Rejections, 35 U.S.C. §103**

On page 5 of the Office Action, the Examiner rejected claims 1-30 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/00575536 to Kasper, II et al. (“Kasper”) in view of U.S. Patent No. 6,513,131 to Kanekawa et al. (“Kanekawa”).

**The Present Invention**

In accordance with the present invention, operational characteristics of a system are identified during normal operations and data pertaining to these characteristics are gathered and stored, to create an operational signature of the system which is compared with samples of operational service measurements being measured during operation everyday operation of the system. These operational characteristics are “service measurements” that are routinely measured and monitored in connection with the operation of systems (e.g., QOS (Quality Of Service) measurements) and are utilized in the reliability architecture of the system. Service measurements include a number of alternative data types, such as transactions completed, messages received, messages sent, calls completed, bytes transmitted, jobs processed, etc. Any operations of the system that are typically monitored for other purposes can be utilized in the reliability architecture of the present invention. Most systems track these types of statistics as, for example, part of their billing procedures or part of their performance bench-marking or QOS processes. Since these statistics are already kept, it is very simple to analyze the statistics to create the historical signatures, and then monitor the statistics of the currently operating system to perform the signature checking process.

**U.S. Patent Application Publication No. 2004/0057536 to Kasper, II et al.**

U.S. Patent Application Publication No. 2004/0057536 to Kasper, II et al. (“Kasper”) teaches an apparatus and method that allows for improved correlation of multiple signatures from an input data stream, reducing the complexity and memory size of the correlation operation by utilization of a multiple sequence indexing correlator. As set forth in paragraph 5, cited by the Examiner, the invention of Kasper is identified as solving a need in the art for a method and apparatus for efficiently detecting multiple specific data patterns in data streams with electronic circuits and, in particular, communication devices.

**U.S. Patent No. 6,513,131 to Kanekawa et al.**

U.S. Patent No. 6,513,131 to Kanekawa et al. (“Kanekawa”) teaches a self-checking circuit, which is useful for a highly reliable system configuration, including a logic circuit having an error detection function.

**The Examiner has not Established a *prima facie* Case of Obviousness**

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

The Examiner has not established any motivation or suggestion to combine the referenced teachings to achieve the claimed invention. Kasper is a sequence detector which is specifically utilized to identify a particular numerical sequence occurring in a data stream. While the term “signatures” is used in Kasper, a reading of Kasper indicates that the signatures that are being identified are numerical patterns in input signals. Kasper is limited to analyzing numerical patterns and looking for patterns that match a predetermined pattern. As set forth in paragraph 2, when an input signal matches one of the patterns (or signatures), the electronic circuit takes a selected action. Thus, the invention of Kasper is directed to an improvement in data pattern recognition in data streams.

Nothing in Kasper teaches or suggests detecting failures in a system; rather, Kasper is merely detecting patterns within a data signal. Further, nothing in Kasper teaches or suggests the identification of an operational signature of a system, with the operational signature being representative of the system when it is operating properly. In particular, the operational signature, as defined in the specification, relates to service measurements that are routinely measured and monitored in connection with the operation of the system. Examples given include, in a

telecommunications system, the number of call requests successfully processed; in a banking system, the number of bank transactions successfully processed might be monitored, etc.

Further, nothing in Kasper teaches or suggests the performance of corrective measures if comparing the samples of operational service measurements with the operational signature indicates the probability of a silent failure.

The addition of Kanekawa does not provide the missing teachings or suggestions. In fact, the portions of Kanekawa pointed to by the Examiner in the rejection do not make mention of silent failures. However, applicant has not claimed to have invented the detection of silent failures in any event. Rather, applicant has invented a system whereby operational parameters associated with the operation of a system, such as number of calls being made in a telephone system during a particular time, are monitored both in a correctly operating status and then in an ongoing status, and comparisons are made to see if there is a difference between the operational signature representing the operation of the device when it is working properly and the current operational parameters. The claims specifically recites these novel elements, neither taught nor suggested by the cited art, as exemplified by independent claim 1:

A method for detecting silent failures in a system, comprising the steps of:  
    identifying an operational signature of said system, said operational signature being representative of the system when it is operating properly;  
    obtaining samples of operational service measurements;  
    comparing said samples with said operational signature; and  
    performing a corrective measure if said comparison of said samples with said operational signature indicates the probability of a silent failure of said system.

Without such a teaching or suggestion, the combination proposed by the Examiner is inappropriate for a rejection under 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims based on the Kasper/Kanekawa combination.

**Conclusion**

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

Included herein is a Petition for extension of time to respond to the Examiner's Action, and authorization to charge the extension fee to a credit card. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

July 20, 2006  
Date

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